Abstracts

A Miniaturized Broad-Band MMIC Frequency Doubler

T. Hiraoka, T. Tokumitsu and M. Akaike. "A Miniaturized Broad-Band MMIC Frequency Doubler." 1990 Transactions on Microwave Theory and Techniques 38.12 (Dec. 1990 [T-MTT] (1990 Symposium Issue)): 1932-1937.

A miniaturized broad-band balanced MMIC frequency doubler, which consists of a common-gate FET and a common-source FET directly connected on each drain electrode, is proposed. A size of 0.5 mm X 0.5 mm, excluding the output matching circuit, is achieved with conversion loss from 8 to 10 dB and fundamental signal suppression better than 17 dB from 6 to 16 GHz. The broad-band doubler as a miniaturized MMIC function module is valuable for MMIC oscillators, front ends, and transmitters.

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